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February 12, 1996

Secretary
Federal Communications Commission
1919 M Street, N. W., Room 222
Washington, D.C. 20554



RE: Docket ET 95-177

Dear FCC Secretary:

I am writing to urge your commission to expand the available frequencies and increase the permitted power for biomedical telemetry devices as outlined in ET Docket No. 95-177. Since 1967, I have been involved in the care of hospitalized patients requiring cardiac monitoring in intensive care units (ICUs) and "intermediate" care units with telemetry monitoring capability. Following the attainment of a PhD degree in 1990, I have joined the faculty at the University of California, San Francisco, and have built a whole program of research related to improving cardiac monitoring practices for hospitalized patients. I have attached a list of some of my publications as evidence of my qualifications to address the problem of limited availability of telemetry channels.

The advent of telemetry cardiac monitoring revolutionized the way patients were cared for in the hospital. Patients were no longer restricted to their beds in order for health care professionals to closely observe their heart rhythms. In "the old days," patients suffering a heart attack were required to stay in bed for days and weeks, often requiring heavy sedation, in order to monitor their heart rhythm and other vital signs. Prolonged bed-rest had deleterious effects, often causing muscle de-conditioning and weakness as well as serious circulatory complications such as thrombophlebitis and pulmonary embolism. Such prolonged immobility made it difficult to get a patient "back on his feet" following a heart attack or cardiac surgery. Thus, long hospital stays were common and hospital costs spiraled. When it became feasible to monitor patients by telemetry, it was no longer necessary to restrict patients to their beds, and they avoided the deleterious effects of bed-rest with its concomitant complications. As a result, patients got on their feet much earlier and were able to be discharged home from the hospital earlier.

Another big advantage of telemetry monitoring is that physicians and nurses are able to see what abnormalities the patient might develop while doing the activities of normal daily living such as walking, bathing, toileting, etc. Therefore, telemetry monitoring provides a much more accurate assessment of how safe it is to let the patient go home and care for himself.

In recent years, research has shown that the more signals from the heart that can be displayed with the telemetry monitor, the more accurate the diagnosis is of various cardiac rhythm disorders. In addition, it has become possible in recent years to detect when the heart is deprived of oxygen which also requires multiple signals. Furthermore, if one can monitor blood pressure, respiration, and other important vital signs along with cardiac rhythm, a more complete picture of the patient's problem can be made. Many of the important cardiac events detected by telemetry monitoring devices occur intermittently and may last only seconds or minutes. Documentation of these episodic events means the physician can determine the precise problem and select the right treatment plan. It is extremely important that telemetry channels not be contaminated with interference from other signals so that episodic events are reliably detected and that "false alarms" are avoided.

It is estimated that the number of intensive care beds in hospitals across the United States will continue to decline because of the staggering costs associated in caring for patients in an ICU. What this means is that patients who used to be cared for in an ICU following a heart attack or cardiac surgery will now be treated on a medical unit with telemetry monitoring. It is imperative that we have access to non-contaminated channels and that an adequate number of channels be available to continue the types of sophisticated monitoring of numerous cardiac parameters which has given our country's hospital care its well-deserved notoriety around the world.

In summary, I and my colleagues at the Schools of Nursing and Medicine at the University of California, San Francisco, urge you to act quickly to expand the available telemetry channels for biomedical devices.

Sincerely,

Barbara Drew

Barbara J. Drew, RN, PhD, FAAN
Assistant Professor & Acting Chairperson
Department of Physiological Nursing, UCSF

cc: Ms. Elisabeth M. George
Jim Cyrier
Carla Joliat

**Barbara J. Drew, RN, PhD, FAAN**

**ORIGINAL ARTICLES:** (Data Based articles +)

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